Quantum

PX500 Series DLTSage™ Tape Security Quick Start Guide

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Introduction

The PX500 Series (PX502, PX506, and PX510) tape libraries with DLT-S4 tape drives are capable of utilizing DLTSage Tape security. DLTSage Tape Security is a unique solution designed to prevent unauthorized access to tape cartridges which is particularly valuable when protecting tapes that are transported offsite. DLTSage Tape Security is a firmware feature designed into the DLT-S4 tape drive which uses an electronic key to prevent or allow reading and writing of data on to a tape cartridge. This key is managed through the remote management pages of the PX500 Series tape library (refer to the *Quantum PX500 Series User's Guide*, PN 81-81290 located on the *PX500 Series Documentation CD* for more information on the remote management pages). DLTSage Tape Security is available at no additional cost as an integrated feature in of the DLT-S4 tape drive and PX500 Series tape library (firmware version 20 or later).

Notational Conventions

This instruction uses the following conventions:

Note: Notes emphasize important information related to the main topic.

CAUTION: Cautions indicate potential hazards to equipment and are included to prevent damage to equipment.

WARNING: Warnings indicate potential hazards to personal safety and are included to prevent injury.

Setting up your PX500 Series tape library with DLTSage Tape Security consists of the following steps:

- Creating a Secure User
- Creating a Secure Key

Creating a Secure User

CAUTION: If the **Secure Key** information is lost, any tape cartridges that were secured with the lost key will be unavailable for reading or writing.

The **Secure User** is the only user that has the ability to create, modify, and delete a **Secure Key** for the Library. The **Secure User** also has the ability to enable and



disable **Secure Capable Drives** for reading and writing data to and from tapes using the **Secure Key**.

When a user is created with administrator privileges (other than the default admin user), the **Create Secure User** section appears at the bottom of the **Users** page (see <u>figure 1</u>).

Figure 1 Create Secure User

Secure User Name: skadmin		
Secure Password:		
Verify Password:		
,		
	Create	

To create a secure user:

Note: Only users with administrator privileges (other than the default administrator) can create a secure user.

There is only one **Secure User** and the username is always **skadmin**.

1 Enter a secure password.

Note: Secure Passwords must be alphanumeric strings of at least one character. A blank secure password will be rejected. Secure Password and Verify Password must match.

- 2 Verify the secure password by entering the password a second time in the **Verify Password** box.
- 3 Click Create to create the Secure Key password.

Once the **Secure Key** administrator password is added, the **Remove Secure User** section displays at the bottom of the **Users** page (see <u>figure 2</u>).

Figure 2 Remove Secure User

Remove Secure User		
		Remove

To update the Secure Key password:

Note: Only the **Secure User** can change the secure user password.

1 Enter a secure password.

Note: Secure Passwords must be alphanumeric strings of at least one character. A blank secure password will be rejected. Secure Password and Verify Password must match.

- 2 Verify the secure password by entering the password a second time in the **Verify Password** box.
- 3 Click **Update** to update the **Secure Key** password.

The Secure Key password is updated.

Creating a Secure Key

The **Secure Key** tab displays when a secure user has been added to the library and the secure user is logged in.

Note: When logging on as a secure user, the IP address entered in the address line of the internet browser uses https, not the common http. Example: https://<ip address>

To access the **Secure Key** page, from the **Setup** page, click on the **Secure Key** tab at the top of the page.

The **Secure Key** page displays (see <u>figure 3</u>).

Figure 3 Secure Key Page

Quantum	PX50	2 reliable	e containt	nfident	reliable Sociale	flexible
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ification Users SCSL/Fib	re Network	Events Date	e & Time Lib	rary Se	cure Key	Kelefelice
Protection Mode for Cartridge	es.					
System must be offline to	Modify Secure	Key Mode.				
When enabled for a drive, t	he Secure Key w	vill always be used	d for reading d	ata from a		
cartridge in the drive. Protection Mode Options fo	r Writing a Secur	e Kev to a Cartri	dae:			
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System must be offline to	o Enable/Disabl	e Secure Key fo	r Drives.			
C Enable Secure Key for A C Disable Secure Key for A	II Drives. All Drives.					
abinet Drive Model	Тур	e Ser	ial No.	Secure K	ey	
31 0 DLT-S4		CX0535	AMD00349		_	
		_	Update	Cancel		
Select Secure Key for Library						
Current Library Secure Key	Name:	Key for Library.				
Secure Key Name, Date Cre	ated					
			Update	Cancel		
Assign Secure Key to Cartride	ge					
Find Secured Cartridges				Find		
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Assigns a selected Secure H	ridge and a Secu	ices or commas, s ire Key.	selecting kem	ove remov	es any	
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The Secure Key page is divided into the following sections:

- Protection Mode for Cartridges
- Enable/Disable Secure Key for Drives
- Modify Secure Key for Library
- Assign Secure Key to Cartridge
- <u>Create Secure Key Name/Secure Key Pair</u>
- <u>Delete Secure Key Name</u>
- Backup Secure Key File
- Upload Secure Key File

Protection Mode for Cartridges

Refer to <u>figure 4</u> for information on **Protection Mode for Cartridges**.

Figure 4 Protection Mode for Cartridges



The **Protection Mode for Cartridges** area defines when the **Secure Key** is used for a cartridge in a tape drive with a **Secure Key** enabled. In all modes, the **Secure Key** is used to read data from cartridges that have a pre-existing **Secure Key**. If the **Secure Key** on the cartridge does not match the current **Secure Key** on the library, the data on the cartridge can not be read.

Three write protection modes are available:

- Never Write Secure Key to a Cartridge The Secure Key will never be written to a cartridge placed in a secured tape drive.
- Only Write Secure Key to Blank Cartridges The Secure Key will only be written to blank, unformatted cartridges.
- Write Secure Key to All Cartridges The Secure Key will be written to all cartridges, including blank and formatted cartridges containing data. This mode may be used to apply a Secure Key to cartridges with preexisting data.

Enable/Disable Secure Key for Drives

Refer to <u>figure 5</u> for information on **Enable/Disable Secure Key for Drives**.

Figure 5 Enable/Disable Secure Key for Drives

Enable	e/Disable	Secure Key for Dri	ves		
Syst CE CD	em must nable Sec isable Sec	be offline to Ena sure Key for All Driv cure Key for All Dri	ble/Disable Secur ves. ves.	e Key for Drives.	
Cabinet	Drive	Model	Туре	Serial No.	Secure Key
31	0	DLT-S4		CX0535AMD00349	Cancel

The Secure Key can only be used with tape drives that are Secure Key capable. This section lists the tape drives in the library that are Secure Key capable. A checkmark in the Secure Key column indicates a Secure Key is enabled for the tape drive.

- 1 The **Secure Key** can be enabled or disabled for all tape drives by clicking the corresponding radio button.
- 2 Click the **Secure Key** check box for individual tape drives to enable/disable **Secure Key** for a tape drive.
- 3 Click Update to activate the changes.

Note: The system must be offline to Enable/Disable Secure Key setting for drives.

Modify Secure Key for Library

Refer to <u>figure 6</u> for information on **Modify Secure Key for Library**.

Figure 6 Modify Secure Key for Library



To modify the Secure Key used by the library:

1 Select the **Secure Key** name from the list of available names.

Note: Selecting **None** to will cause the library to NOT use a **Secure Key**.

2 Click Update.

Note: The system must be offline to modify a Secure Key.

Assign Secure Key to Cartridge

Refer to <u>figure 7</u> for information on **Assign Secure Key to Cartridge**.

Figure 7 Assign Secure Key to Cartridge

Assign Secure Key to Cartridge		
Find Secured Cartridges		Find
Assigns a selected Secure Key to one or more cartridges (another system). Separate barcodes by spaces or comma association between a cartridge and a Secure Key.	(i.e. a cartidge s. Selecting 'Re	imported from emove' removes any
Barcode		
Secure Key Name, Date Created	_	
	Update	Cancel

Click **Find** to list all secured cartridges and their assigned **Secure Key** names.

To assign a Secure Key to a cartridge:

- 1 Enter the barcode of the cartridge. Separate multiple barcodes with either spaces or commas.
- **2** Select a **Secure Key** name from the list of available names.
- **3** Selecting **Remove** will remove the association between the cartridge and a **Secure Key** name in the cartridge database.
- 4 Click Update to accept the changes.

Create Secure Key Name/ Secure Key Pair

Refer to <u>figure 8</u> for information on **Create Secure Key Name/Secure Key Pair**.

Figure 8 Create Secure Key Name/Secure Key Pair

Secure Key Name Secure Key Verify Secure Key	
Secure Key Verify Secure Key	
Secure Key Verify Secure Key	
Verify Secure Key	
Verify Secure Key	
New Cancel	

To create a secure key name/secure key pair:

1 Enter the Secure Key Name.

Note: The **Secure Key** name must be less than 12 characters, may include spaces, but cannot contain the following characters: () = ;

- 2 Enter a securekey in the protected Secure Key field.
- **3** Enter the same **Secure Key** in the **Verify Secure Key** field.

Note: The **Secure Key** must be at least 8 characters and no more than 32 characters.

4 Click New to create the Secure Key name/key pair.

Delete Secure Key Name

Refer to <u>figure 9</u> for information on **Delete Secure Key** Name.

Figure 9 Delete Secure Key Name

Delete Secure Key & Secure Key Name
WARNING: Deleting a Secure Key removes it from the system's memory. Any cartridges requiring this Secure Key will be unreadable on this system unless the Secure Key is restored.
Backing up the Secure Key file is strongly recommended before deleting any Secure Keys.
Unused Keys: Secure Key Name, Date Created
Inactive Keys: Secure Key Name, Date Created
Active Keys:
Secure Key Name, Date Created
1
Delete Cancel

The **Secure Key Names** maintained on the library are displayed in one of three lists:

- Unused Secure Keys keys not associated with any cartridges or tape drives currently in the system.
- Inactive Secure Keys keys associated with cartridges in the library, or currently assigned to the library, but not assigned to any tape drives.
- Active Secure Keys keys currently assigned to a tape drive.

To delete a **Secure Key Name/Secure Key** pair from the library:

- 1 Select the desired **Secure Key Names** from the available lists.
- 2 Click Delete.

A confirmation message will be displayed, click **Yes** to continue.

Any tape drives that have been **Secure Key** enabled will remain enabled, but the **Secure Key** will not be used to read or write cartridges.

Backup Secure Key File

Refer to <u>figure 10</u> for information on **Backup Secure Key File**.

Figure 10 Backup Secure Key File

Backup Secure Key File	
NOTE: The Encryption Key of the Library is required when restoring a Se different Library. Please keep the Secure Key File's associated Encryption but accessible location.	cure Key File to a n Key in a secure,
Encryption Key:	
Verify Encryption Key:	
	Save As

The list of **Secure Key Name/Secure Key Pairs** maintained on the library should be backed up to a local device whenever a change is made to the security keys.

Note: Note the library's **Encryption Key**. The **Encryption Key** is required when restoring the file to any library.

- 1 Click Save As...
- 2 From the browser's **Save** window, select a path and name the file.
- 3 Click OK.

Upload Secure Key File

Refer to <u>figure 11</u> for information on **Upload Secure Key File**.

Figure 11 Upload Secure Key File

	Upload Secure Key File
	Encryption Key (Required):
	File Name:
Browse	
Upload	
Browse	File Name:

A file containing a list of **Secure Key Name/Secure Key Pairs** can be restored to the library.

Note: The **Encryption Key** of the library originally maintaining the list is required to restore the file.

To upload (restore) a Secure Key File:

- 1 Enter the Encryption Key of the original library.
- 2 Enter the path and file name of the file to be uploaded (click **Browse...**)
- 3 Click Upload button.

A progress window is displayed indicating when the upload is complete or if any errors occurred during the upload or restoration of the file.

The **Secure Key** page is refreshed listing restored secure keys.

Note: An error is displayed if the serial number provided does not match the serial number used to encode the secure keys.

Importing Secured Tape Cartridges

If you need to import tape cartridges into your library which have been secured with a key from another PX500 Series library, you need to import the **Secure Key** before the library can read or write to the tape cartridges.

To import secured tapes:

- 1 Write down the barcodes for every secured tape that will be imported into the library. You will need to have these barcodes available when associating the tape cartridges with the **Secure Key**.
- 2 Insert the tape cartridges into the PX500 Series library (refer to the PX500 Series User's Guide (PN 81-81290) for information on inserting tape cartridges.
- 3 On the PX500 Series library where the tape cartridges were originally secured with a key, backup the specific Secure Key associated with those tape cartridges (see <u>Backup Secure Key File</u>).
- 4 Upload the Secure Key from the original library to the where the tape cartridges were imported (see <u>Upload</u> <u>Secure Key File</u>).
- 5 Assign the barcode labels from the imported tape cartridges with the Secure Key from the original library (see <u>Assign Secure Key to Cartridge</u>).

The imported tape cartridges are now associated with the **Secure Key**.

Secure Key Maintenance

Quantum strongly recommends that you backup your secure keys whenever a new key is added (see <u>Backup Secure Key</u> <u>File</u>). The location of these keys should be available to library administrators who need access to secured tape cartridges.

CAUTION: If the **Secure Key** information is lost, any tape cartridges that were secured with the lost key will be unavailable for reading or writing.

Quantum

United States of America Quantum Corporation 141 Innovation Drive Irvine, CA 92612 U.S.A. phone 949.856.7800 fax 949.856.7799

European Headquarters Quantum Corporaton 3 Bracknell Beeches Old Bracknell Lane West Bracknell Berkshire RG12 7BW United Kingdom phone +44 1344 353500 fax +44 1344 353510 Asia Pacific Quantum Corporation 9 Temasek Boulevard, #08-03 Suntec Tower Two Singapore 038989 Tel: +65 6334 0660 Fax: +65 6432 2830 Email: singapore.sales@quantum.com

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